Version No: 00
Code: AC100008

SALICYLIC ACID – SAFETY DATA SHEET

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

PRODUCT IDENTIFIER

Product name (as labelled)	SALICYLIC ACID
Uses	Intermediate. In perfumery/flavouring. Manufacture of methyl salicylate, acetyl salicylic acid (aspirin) and other salicylates; perfumes and dyes. As a reagent in analytical chemistry. A preservative of food products, but its use is forbidden in some countries.

DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Registered distributor company name	Pure Ingredients Ltd
Address	626A Rosebank Road, Avondale 1026
Telephone	+649 8135619
Website	www.pureingredients.co.nz
Email	compliance@pureingredients.co.nz

EMERGENCY TELEPHONE NUMBER

Association / Organisation	0800 CHEMCALL / 800 243 622 (24hr)
Emergency telephone numbers	111
Other emergency telephone numbers	0800 764 766

SECTION 2 HAZARDS IDENTIFICATION

HSNO Hazard Classification: 6.1D, 6.3A, 6.4A, 9.1D, 9.3B

Hazardous Nature: This product is classified as hazardous under HSNO criteria.

Pictogram:
Signal Word: **WARNING**

HAZARD STATEMENT:

H302	Harmful if swallowed.
H315	Causes severe skin burns and eye damage.
H319	Causes serious eye irritation.
H413	May cause long lasting harmful effects to aquatic life.
H432	Toxic to terrestrial vertebrates.

PREVENTION:

P104	Read Safety Data Sheet before use.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink, or smoke when using this product.
P280	Wear protective eye protection/face protection.

RESPONSE:

P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330	Rinse mouth.
P331	Do NOT induce vomiting.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P362	Take off contaminated clothing and wash before re-use.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P391	Collect spillage.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Name	CAS No.	% by weight
SALICYLIC ACID	69-72-7	≥98

SECTION 4 FIRST AID MEASURES

NZ Poisons Centre 0800 POISON (0800 764 766) | NZ Emergency Services: 111

Eye Contact	If this product comes in contact with the eyes: • Immediately hold eyelids apart and flush the eye continuously with running water. • Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. • Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SECTION 4 FIRST AID MEASURES

NZ Poisons Centre 0800 POISON (0800 764 766) | NZ Emergency Services: 111

Skin Contact	If skin or hair contact occurs: • Immediately flush body and clothes with large amounts of water, using safety shower if available. • Quickly remove all contaminated clothing, including footwear. Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre. Transport to hospital, or doctor.
Inhalation	• If fumes or combustion products are inhaled remove from contaminated area. • Lay patient down. Keep warm and rested. • Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. • Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor, without delay.
Ingestion	• **IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.** • For advice, contact a Poisons Information Centre or a doctor. • Urgent hospital treatment is likely to be needed. • In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition. • If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the SDS should be provided. Further action will be the responsibility of the medical specialist. • If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the SDS. **Where medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:** • **INDUCE** vomiting with fingers down the back of the throat, ONLY IF CONSCIOUS. Lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. **NOTE:** Wear a protective glove when inducing vomiting by mechanical means.

Indication of any immediate medical attention and special treatment needed

For salicylate intoxication:

- Pending gastric lavage, use emetics such as syrup of Ipecac or delay gastric emptying and absorption by swallowing a slurry of activated charcoal. Do not give ipecac after charcoal.
- Gastric lavage with water or perhaps sodium bicarbonate solution (3%-5%). Mild alkali delays salicylate absorption from the stomach and perhaps slightly from the duodenum.
- Saline catharsis with sodium or magnesium sulphate (15-30 gm in water).
- Take an immediate blood sample for an appraisal of the patient's acid-base status. A pH determination on an anaerobic sample of arterial blood is best. An analysis of the plasma salicylate concentration should be made at the same time. Laboratory controls are almost essential for the proper management of severe salicylism.
- In the presence of an established acidosis, alkali therapy is essential, but at least in an adult, alkali should be withheld until its need is demonstrated by chemical analysis. The intensity of treatment depends on the intensity of acidosis. In the presence of vomiting, intravenous sodium bicarbonate is the most satisfactory of all alkali therapy.
- Correct dehydration and hypoglycaemia (if present) by the intravenous administration of glucose in water or in isotonic saline. The administration of glucose may also serve to remedy ketosis which is often seen in poisoned children.
- Even in patients without hypoglycaemia, infusions of glucose adequate to produce distinct hyperglycaemia are recommended to prevent glucose depletion in the brain. This recommendation is based on impressive experimental data in animals.
- Renal function should be supported by correcting dehydration and incipient shock. Overhydration is not justified. An alkaline urine should be maintained by the administration of alkali if necessary with care to prevent a severe systemic alkalosis. As long as urine remains alkaline (pH above 7.5), administration of an osmotic diuretic such as mannitol or perhaps THAM is useful, but one must be careful to avoid hypokalaemia. Supplements of potassium chloride should be included in parenteral fluids.
- Small doses of barbiturates, diazepam, paraldehyde, or perhaps other sedatives (but probably not morphine) may be required to suppress extreme restlessness and convulsions.
- For hyperpyrexia, use sponge baths.

The presence of petechiae or other signs of haemorrhagic tendency calls for a large Vitamin K dose and perhaps ascorbic acid. Minor transfusions may be necessary since bleeding in salicylism is not always due to a prothrombin effect.

- Haemodialysis and hemoperfusions have proved useful in salicylate poisoning, as have peritoneal dialysis and exchange transfusions, but alkaline diuretic therapy is probably sufficient except in fulminating cases.

[GOSSELIN, et.al.: Clinical Toxicology of Commercial Products]

The mechanism of the toxic effect involves metabolic acidosis, respiratory alkalosis, hypoglycaemia, and potassium depletion. Salicylate poisoning is characterised by extreme acid-base disturbances, electrolyte disturbances and decreased levels of consciousness. There are differences between acute and chronic toxicity and a varying clinical picture which is dependent on the age of the patient and their kidney function. The major feature of poisoning is metabolic acidosis due to "uncoupling of oxidative phosphorylation" which produces an increased metabolic rate, increased oxygen consumption, increased formation of carbon dioxide, increased heat production and increased utilisation of glucose. Direct stimulation of the respiratory centre leads to hyperventilation and respiratory alkalosis. This leads to compensatory increased renal excretion of bicarbonate which contributes to the metabolic acidosis which may coexist or develop subsequently. Hypoglycaemia may occur as a result of increased glucose demand, increased rates of tissue glycolysis, and impaired rate of glucose synthesis. NOTE: Tissue glucose levels may be lower than plasma levels. Hyperglycaemia may occur due to increased glycogenolysis. Potassium depletion occurs as a result of increased renal excretion as well as intracellular movement of potassium.

Salicylates competitively inhibit vitamin K dependent synthesis of factors II, VII, IX, X and in addition, may produce a mild dose dependent hepatitis. Salicylates are bound to albumin. The extent of protein binding is concentration dependent (and falls with higher blood levels). This, and the effects of acidosis, decreasing ionisation, means that the volume of distribution increases markedly in overdose as does CNS penetration. The extent of protein binding (50-80%) and the rate of metabolism are concentration dependent. Hepatic clearance has zero order kinetics and thus the therapeutic half-life of 2-4.5 hours but the half-life in overdose is 18-36 hours. Renal excretion is the most important route in overdose. Thus when the salicylate concentrations are in the toxic range there is increased tissue distribution and impaired clearance of the drug.

HyperTox 3.0 https://www.ozemail.com.au/~ouad/SALI0001.HTA for non-steroidal anti-inflammatories (NSAIDs)

- Symptoms following acute NSAIDs overdoses are usually limited to lethargy, drowsiness, nausea, vomiting, and epigastric pain, which are generally reversible with supportive care. Gastrointestinal bleeding can occur. Hypertension, acute renal failure, respiratory depression, and coma may occur, but are rare. Anaphylactoid reactions have been reported with therapeutic ingestion of NSAIDs, and may occur following an overdose.
- Patients should be managed by symptomatic and supportive care following a NSAIDs overdose.
- There are no specific antidotes.
- Emesis and/or activated charcoal (60 to 100 grams in adults, 1 to 2 g/kg in children), and/or osmotic cathartic may be indicated in patients seen within 4 hours of ingestion with symptoms or following a large overdose (5 to 10 times the usual dose).
- Forced diuresis, alkalinisation of urine, hemodialysis, or haemoperfusion may not be useful due to high protein binding.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media	Foam, dry chemical powder, BCF (where regulations permit), Carbon dioxide, Water spray or fog - Large fires only.
Fire Incompatibility	Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result
Advice for firefighters	
Fire Fighting	• Alert Fire Brigade and tell them location and nature of hazard. • Wear breathing apparatus plus protective gloves. • Prevent, by any means available, spillage from entering drains or water courses. Use water delivered as a fine spray to control fire and cool adjacent area. • DO NOT approach containers suspected to be hot. • Cool fire exposed containers with water spray from a protected location.
Fire/Explosion Hazard	• Combustible solid which burns but propagates flame with difficulty; it is estimated that most organic dusts are combustible (circa 70%) - according to the circumstances under which the combustion process occurs, such materials may cause fires and / or dust explosions. • Organic powders when finely divided over a range of concentrations regardless of particulate size or shape and suspended in air or some other oxidizing medium may form explosive dust-air mixtures and result in a fire or dust explosion (including secondary explosions). • Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust (420 micron or less) may burn rapidly and fiercely if ignited - particles exceeding this limit will generally not form flammable dust clouds; once initiated, however, larger particles up to 1400 microns diameter will contribute to the propagation of an explosion. • In the same way as gases and vapours, dusts in the form of a cloud are only ignitable over a range of concentrations; in principle, the concepts of lower explosive limit (LEL) and upper explosive limit (UEL) are applicable to dust clouds but only the LEL is of practical use; - this is because of the inherent difficulty of achieving homogeneous dust clouds at high temperatures (for dusts the LEL is often called the "Minimum Explosible Concentration", MEC). • When processed with flammable liquids/vapours/mists, ignitable (hybrid) mixtures may be formed with combustible dusts. Combustion products include: • Carbon monoxide (CO) • Carbon dioxide (CO2) • Other pyrolysis products typical of burning organic material. May emit poisonous fumes. May emit corrosive fumes. |Sublimes at 76 C and may form an explosive vapour mixture with air. Decomposes on heating and produces acrid and toxic fumes of phenols and other aromatics.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8
Environmental precautions	See section 12

Methods and material for containment and cleaning up

Minor Spills	Clean up waste regularly and abnormal spills immediately. Avoid breathing dust and contact with skin and eyes. Wear protective clothing, gloves, safety glasses and dust respirator. Use dry clean up procedures and avoid generating dust.
Major Spills	Moderate hazard. CAUTION Advise personnel in area. Alert Emergency Services and tell them location and nature of hazard. Control personal contact by wearing protective clothing.

SECTION 7 HANDLING AND STORAGE

Safe handling	Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps. Organic powders when finely divided over a range of concentrations regardless of particulate size or shape and suspended in air or some other oxidizing medium may form explosive dust-air mixtures and result in a fire or dust explosion (including secondary explosions) Minimise airborne dust and eliminate all ignition sources. Keep away from heat, hot surfaces, sparks, and flame. Establish good housekeeping practices. Remove dust accumulations on a regular basis by vacuuming or gentle sweeping to avoid creating dust clouds.
Other information	Store in original containers. Keep containers securely sealed. Store in a cool, dry area protected from environmental extremes. Store away from incompatible materials and foodstuff containers.
Suitable container	Glass container is suitable for laboratory quantities Polyethylene or polypropylene container. Check all containers are clearly labelled and free from leaks.
Storage Incompatibility	Reacts with strong oxidisers, organic nitrites (such as ethyl nitrite), iodine, iron salts, lead diacetate Is incompatible with sulfuric acid, alkalis, ammonia, aliphatic amines, alkanolamines, isocyanates, alkylene oxides, epichlorohydrin Avoid strong acids, bases. Avoid reaction with oxidising agents

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Appropriate engineering controls	**For potent pharmacological agents: Powders** To prevent contamination and overexposure, no open handling of powder should be allowed. • Powder handling operations are to be done in a powders weighing hood, a glove box, or other equivalent ventilated • containment system. • In situations where these ventilated containment hoods have not been installed, a non-ventilated enclosed containment hood should be used. • Pending changes resulting from additional air monitoring data, up to 300 mg can be handled outside of an enclosure provided that no grinding, crushing or other dust-generating process occurs. Enclosed local exhaust ventilation is required at points of dust, fume or vapour generation. HEPA terminated local exhaust ventilation should be considered at point of generation of dust, fumes or vapours. Barrier protection or laminar flow cabinets should be considered for laboratory scale handling. A fume hood or vented balance enclosure is recommended for weighing/ transferring quantities exceeding 500 mg.
Personal protection	
Eye and face protection	When handling very small quantities of the material eye protection may not be required. For laboratory, larger scale or bulk handling or where regular exposure in an occupational setting occurs: • Chemical goggles. • Face shield. Full face shield may be required for supplementary but never for primary protection of eyes.
Skin protection	See Hand protection below
Hands/feet protection	• Elbow length PVC gloves **NOTE:** • The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. • Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed. The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice. Personal hygiene is a key element of effective hand care. Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present. • Polychloroprene • Nitrile rubber • Butyl rubber • Rubber gloves (nitrile or low-protein, powder-free latex, latex/ nitrile). Employees allergic to latex gloves should use nitrile gloves in preference • Double gloving should be considered. • PVC gloves
Body protection	See Other protection below
Other protection	For quantities up to 500 grams a laboratory coat may be suitable. For quantities up to 1 kilogram a disposable laboratory coat or coverall of low permeability is recommended. Coveralls should be buttoned at collar and cuffs. For quantities over 1 kilogram and manufacturing operations, wear disposable coverall of low permeability and disposable shoe covers.
Thermal hazards	Not available
Respiratory protection	Particulate. (AS/NZS 1716 & 1715, EN 143:000 & 149:001, ANSI Z88 or national equivalent)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White to light tan powder or crystals□ Darkens on exposure to light and/or air over a long term. Odourless to slight phenolic odour. Slightly soluble and sinks in water.		
Melting point I freezing point (°C)	157 - 161	Solubility In water (g/L)	Partly miscible
Initial boiling point and boiling range (°C)	211 @ 2.67 kPa	Relative density (Water= 1)	1.443
Flash point (° C)	157 (TCC)	Auto-Ignition temperature (°C)	545
Lower Explosive Limit (%)	1.1	Molecular weight (g/mol)	138.12
Vapour pressure (kPa)	<0.133 @ 20°C	pH as a solution (1%)	2.4 (0.2%)
Vapour density (Air = 1)	4.8		

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Inhaled	The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled. If prior damage to the circulatory or nervous systems has occurred or if kidney damage has been sustained, proper screenings should be conducted on individuals who may be exposed to further risk if handling and use of the material result in excessive exposures. Inhalation may result in coughing and breathing difficulties with shortness of breath.
Ingestion	Accidentol ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual. High oral doses of salicylates, such as aspirin, may cause a mild burning pain in the throat and stomach, causing vomiting. This is followed (within hours) by deep, rapid breathing, tiredness, nausea and further vomiting, thirst and diarrhoea. Non-steroidal anti-inflammatory drug (NSAID) overdose may produce nausea, vomiting, indigestion and upper abdominal pain. Other effects may include drowsiness, dizziness, confusion, disorientation, lethargy, "pins and needles", intense headache, blurred vision, ringing in the ears, muscle twitching, convulsions, stupor and coma.
Skin Contact	The material may cause mild but significant inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterised by redness, swelling and blistering. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected. Skin contact with the material may produce severely toxic effects; systemic effects may result following absorption and these may be fatal. Symptoms of acute systemic salicylate poisoning have been reported following application of ointments or lotions to large areas of the body.
Eye	If applied to the eyes, this material causes severe eye damage.
Chronic	Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. There is limited evidence that, skin contact with this product is more likely to cause a sensitisation reaction in some persons compared to the general population. Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis, caused by particles less than 0.5 micron penetrating and remaining in the lung. Prolonged use of non-steroidal analgesics damages the lining of the gastrointestinal tract, causing ulcers and bleeding. There may be diarrhoea or constipation, perforations causing serious infection, and blood in the vomit or stools. Chronic exposure to salicylates produce problems with metabolism, central nervous system disturbances, or kidney damage. Those with pre-existing damage to the eye, skin or kidney are especially at risk. Chronic exposure can cause metabolic disturbances and damage to the kidney or pancreas.jPersons with pre-existing skin disorders, eye problems or impaired kidney function may be more susceptible to the effects of the substance.

Salicylic Acid	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mglkg	Eye (rabbit): 100 mg -SEVERE
	Oral (rat) LD50: 200-2000 mg/kg	Eye (rabbit): 100 mg -SEVERE
	Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. For certain benzyl derivatives: The members of this group are rapidly absorbed through the gastrointestinal tract, metabolised primarily in the liver, and excreted primarily in the urine either unchanged or as conjugates of benzoic acid derivatives. At high dose levels, gut micro-organisms may act to produce minor amounts of breakdown products. However, no adverse effects have been reported even at repeated high doses. Similarly, no effects were observed on reproduction, foetal development and tumour potential. The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. A member or analogue of a group of hydroxy and alkoxy-substituted benzyl derivatives generally regarded as safe (GRAS) based in part on their self-limiting properties as flavouring substances in food; their rapid absorption. metabolic detoxification, and excretion in humans and other animals, their low level of flavour use, the wide margin of safety between the conservative estimates of intake and the no-observed-adverse effect levels determined from chronic and subchronic studies and the lack of significant genotoxic and mutagenic potential. This evidence of safety is supported by the fact that the intake of benzyl derivatives as natural components of traditional foods is greater than the intake as intentionally added flavouring substances. All members of this group are aromatic primary alcohols, aldehydes, carboxylic acids or their corresponding esters or acetals.	

SECTION 12 ECOLOGICAL INFORMATION

Endpoint	Test Duration (hr)	Species	Value
LC50	96	Fish	144.354mg/L
EC50	48	Crustacea	870mg/L
EC50	96	Algae or other aquatic plants	420.600mg/L
BCF	96	Algae or other aquatic plants	<50mg/L
EC03	168	Algae or other aquatic plants	21mg/L
NOEC	504	Crustacea	10mg/L

SECTION 12 ECOLOGICAL INFORMATION

Due to the chemical structure of salicylic acid volatilisation and bioconcentration are not expected to be important environmental fate processes. Biodegradation is expected to be the dominant removal mechanism of salicylic acid from soil and water. It may also undergo photochemical degradation in sunlit environmental media
In air, it is expected to exist in both the vapor and particulate phase. Vapor phase reaction with photochemically produced hydroxyl radicals may be important (estimated half-life of 1.2 days).
For Benzyl Derivatives:
Environmental Fate: All members of this group (benzyl, benzoate and 2-hydroxybenzoate (salicylate) esters) contain a benzene ring bonded directly to an oxygenated functional group (aldehyde or ester) that is hydrolysed and/or oxidised to a benzoic acid derivative.
Photodegredation: Benzyl derivatives may undergo photodegredalion if exposed lo sunlight. The calculated half lives for hydroxyl radical reactions range from 4.7 to 64.5 hours. The calculated pholodegradation half-lives for three benzaldehyde derivatives in this chemical category are in the narrow range from 4. 7 hours for m-methoxy-p-hydroxybenzaldehyde to 7.2 hours for the less substituted derivative benzaldehyde.
00 NOT discharge into sewer or waterways

Persistence - Water/Soil	Low
Air	Low
Bioaccumulative potential	MEDIUM (BCF = 1000)
Mobility In soil	LOW (KOC = 23.96)

SECTION 13 DISPOSAL CONSIDERATION

Product/Packaging disposal	Containers may still present a chemical hazard/ danger when empty. Return to supplier for reuse/ recycling if possible. Otherwise: • If container cannot be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury al an authorised landfill. • Where possible retain label warnings and SOS and observe all notices pertaining to the product. Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. A Hierarchy of Controls seems to be common - the user should investigate: • Reduction • Reuse • Recycling • Disposal (if all else fails) This material may be recycled if unused, or if ii has not been contaminated so as to make it unsuitable for its intended use. • Do NOT allow wash water from cleaning or process equipment to enter c1rains • It may be necessary to collect all wash water for treatment before disposal. • In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. • Where in doubt contact the responsible authority.

SECTION 14 TRANSPORT INFORMATION

Land transport (UN):	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
Air transport (ICAO-IATA / DGR):	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
Sea transport (IMDG-Code / GGVSee):	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS Transport in bulk according to Annex II of MARPOL and the IBC code

SECTION 15 REGULATORY INFORMATION

	This substance can be managed under the controls specified in the Transfer Notice or alternatively it may be managed using the conditions specified in an applicable Group Standard.
HSR Number	**HSR002754**
HSNO	New Zealand Hazardous Substances and New Organisms (HSNO) Act

SECTION 16 OTHER INFORMATION

The information contained in this Safety Data Sheet is obtained from current and reliable sources. Pure Ingredients Ltd provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This Safety Data Sheet summarises our best current knowledge of the health and safety hazard information of the product but does not claim to be all inclusive. This document is intended only as a guide to the appropriate handling of this material.

Reference: supplier's SDS.

v00: 27/10/2020 PIL: New issue. SA200